

DISPUTE REVIEW BOARD RECOMMENDATION

September 20, 2012

Mr. Lorenzo Ellis
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 GLF Construction Corporation
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Mr. Jim Martin, P.E.
 Resident Engineer
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RE: SR 30 (US 98) Aucilla River Bridge Replacement
 FIN Project No. 210873-2-52-01, Taylor County

Subject: Hearing Dated September 10, 2012
 Disputes Review Board Recommendation

Gentlemen:

GLF Construction Corporation (GLF) and the Florida Department of Transportation (FDOT) requested a Regional Dispute Review Board hearing of a disputed issue. The hearing was held on Sep. 10, 2012 at the FDOT Lake City Operations Center in Lake City, FL. The parties furnished the Board position papers prior to the hearing. Both parties provided a rebuttal response for review prior to the hearing. The Disputes Review Board was requested only to consider the question of entitlement. In accordance with your request the following recommendation is offered.

Issue: Entitlement to Additional Compensation for the Work Associated with Performing Pile Holes on the Detour Bridge and on the Temporary Work Structure

Background

The principal elements of the project scope include construction of a new bridge of approximately 1440 lineal feet in length and demolition of the existing bridge structure. The construction of a temporary detour bridge was included in the project scope. A temporary work structure was indicated to facilitate the construction.

Contractor Position

The following summary of the Contractor's position is based upon written materials submitted to the Board and upon the hearing presentation. The complete position is available in the Contractor's submitted written materials.

Key Points

1. Initial attempts to drive the piles for the Temporary Detour Bridge were unsuccessful because of the subsurface conditions

Piling installations began with the first template of six piles for the temporary work structure. The GLF design for the temporary work structure involved the use of 24 inch diameter steel piles. Pile installation was initially performed using "normal driving practices". A vibratory hammer was used to seat the pile in the location specified, then the piles were driven with an open-ended diesel hammer until bearing

requirements were achieved. The pipe piles were reinforced with a 24 inch driving band on the top and one pile was equipped with a driving shoe. During this effort the piles were ripped, torn, and buckled. Pile installation could not be achieved with normal driving practices. In the experience of GLF, this indicates the presence of rock which cannot be penetrated using normal driving practices.

On Dec. 9, 2011 Mr. Lorenzo Ellis, GLF, project engineer, informed the FDOT that they were having trouble installing the piling using normal driving methods.¹ The FDOT requested that GLF revisit the pile tip depth design criteria.

The driving criteria were revised by the Specialty Engineer to include the penetration of at least 10 feet into firm bearing material per specification section 5-8.

On Dec. 22, 2011, the FDOT requested a price from GLF for the cost of preforming the pile holes for the temporary work structure and the Temporary Detour Bridge. It should be noted that both the temporary work structure and the Temporary Detour Bridge were lump sum pay items. Therefore payment provisions other than provided in Specification 455-12.9 would have to be explored.² Accordingly, GLF believed that it would be compensated for the extra work as stated in Specification section 455-5.9.3.³

2. Preforming pile holes began

In the last weeks of December 2011, believing that the payment issue was going to be worked out, GLF mobilized and began work on preforming the pile holes.

On January 11, 2012 GLF met with the FDOT at the District 2 offices to submit the requested pricing for preforming the pile holes and discuss moving forward with the project. The FDOT needed more time to review the submitted pricing. GLF was to continue with what was necessary to install the piling.

On January 18, 2012, GLF submitted a letter to the FDOT stating that GLF had complied with all requests of the FDOT and that the issues stated and impacts were ongoing.⁴

On February 3, 2012, not having received any response to its letter dated January 18, 2012, GLF requested direction from the FDOT on how it should proceed.⁵

On February 13, 2012, GLF again requested direction from the FDOT on how GLF should proceed.⁶

On February 13, 2012 GLF received a letter from the FDOT advising that no additional compensation would be paid for preforming the pile holes.⁷

¹ Email from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated December 9, 2011

² FDOT Standard Specifications, section 455-12.9

³ FDOT Standard Specifications, section 455-12.9.3

⁴ Letter from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated January 18, 2012

⁵ Email from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated February 3, 2012

⁶ Letter from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated February 13, 2012

⁷ Letter from Jim Martin (FDOT Resident Engineer) to Lorenzo Ellis (GLF Project Engineer) dated February 13, 2012

On February 17, 2012 GLF responded to the FDOT protesting the decision of the Engineer.⁸

On February 24, 2012 GLF received a letter from the FDOT explaining its request for pricing for the performing of pile holes and providing authorization for GLF to proceed with performing. However, additional compensation for performing the pile holes was denied.⁹

On April 9, 2012 GLF responded to the FDOT's letter dated February 24, 2012 and requested referral of the dispute to the Regional Disputes Review Board.¹⁰

3. The FDOT compensates contractors for performing pile holes

The performing of pile holes is not required for every project, but in section 455-5.9 of the Standard Specifications the FDOT provides for monetary adjustment when this contingency is used. More particularly, Section 455-5.9.2 states that the FDOT "generally anticipates the necessity for performing pile holes" and unequivocally provides that:

The Department will pay for Performed Pile Holes when, (1) shown on the plans, (2) required by the Engineer, or (3) where the Contractor establishes that the required results cannot be obtained when driving the load bearing piles with the specified driving equipment...

Section 455-12.9 provides the basis of payment for these circumstances and plainly provides for additional compensation to the contractor over and above the cost of normal pile installation.

As this additional payment is made by the FDOT even when performing is anticipated by the FDOT at the time of bid and shown on the plans, the specifications direct that the contractor not include the cost of performing in the pile driving unit cost. Consequently, payment for performing pile holes is not dependent on the presence of a differing site condition or other unanticipated events. Rather, the FDOT will pay the contractor for the additional work when it proves necessary.

The possibility of performing is not a pricing risk to be included in the contractor's pile driving unit price; otherwise, the FDOT would be paying the contractor to preform each pile regardless of whether performing was necessary. This contract scheme makes perfect sense, as the FDOT only pays for performing in those instances where performing is ultimately proven necessary. The payment mechanism in section 455 protects both the FDOT and the contractor, as performing is only paid for when performing is actually performed.

⁸ Letter from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated February 17, 2012

⁹ Letter from Jim Martin (FDOT Resident Engineer) to Lorenzo Ellis (GLF Project Engineer) dated February 24, 2012

¹⁰ Letter from Lorenzo Ellis (GLF Project Engineer) to William Keen (FDOT Project Administrator) dated April 9, 2012

4. The preforming contingency was shown on the plans

As reflected in the plans and the design geotechnical report, the FDOT anticipated and made provision for the contingency of preforming pile holes on this project. Sheet B2-5 relates to the foundations and contains the following note:

"5. Hard layers of limestone may be encountered at varying elevations. Driving of piles may be difficult. If minimum penetration requirements cannot be achieved, install piles in preformed holes as authorized by the Engineer. Preform hole depth a minimum of 5 feet from top of the rock surface. Install piles by driving a minimum of 3 feet below bottom of preformed hole to a required capacity or refusal, whichever is less. Preformed holes shall be 20 [sic] in diameter."

The geotechnical report by EGS, although not a Contract Document, likewise recognized the anticipated need for preforming. EGS cautions that *due to hard layers of limestone encountered near the existing ground surface, the driving of piles at this location will be very difficult at some locations; therefore, EGS recommends that at locations were (sic) the minimum tip elevations cannot be reached by normal driving, the following be included in the Plans:*

- *Preform the pile hole to a depth of twelve (12) feet below the surface of the rock;*
- *Install the steel H-Pile and drive the pile to at least three (3) feet below the preformed depth to the required capacity or refusal, whichever is less (Note at least three (3) feet of driving below the perform (sic) depth is recommended);*
- *The diameter of the preform [sic] pile hole should be approximately equal to the depth of the H-Pile to eliminate the need to grout the annular space between the pile and the preformed hole – this should result in a tight fit through the preform (sic) zone.*

These provisions demonstrate that the FDOT anticipated that preforming may prove necessary on this particular project, but the FDOT did *not* undertake to determine during the design process (nor could contractors during the bidding process) which hole(s) would actually have to be preformed.

The note on plan sheet B2-5 contemplates that preforming would be required only when minimum penetration requirements could not first be achieved in the field. When, after first attempting to achieve minimum penetration through normal pile driving means, it was deemed necessary to preform a pile hole to achieve the designated penetration, section 455-5.9 obligated the FDOT to provide the contractor with compensation for the additional effort of preforming that pile hole. The payment mechanism in section 455 thus protects both the FDOT and the contractor as payment is made for preforming only when preforming is actually performed in the field. In light of the preforming contingency being shown on the plans, the first trigger for additional compensation stated in section 455-5.9 was satisfied.

5. Preforming Pile Holes Was "Required by the Engineer"

As early as November 28, 2011, GLF had begun to encounter the hard material that was referenced in the Plan Note #5 on Sheet B2-5. Through conversations on the project site with Jim Martin and Ben Keen with FDOT, it was the general consensus that preforming would be required to achieve the minimum penetration requirements. On December 9, 2011, GLF notified the FDOT by email, seeking confirmation that the solution was preforming the pile holes. GLF also asked whether the FDOT would compensate GLF by a supplemental agreement or on a "force account" basis.

On December 22, 2011, the FDOT responded by email and instructed GLF to submit "the cost per foot for installed pile" so that the FDOT could "start working on the Supplemental Agreement for payment on the Preforming the hole for the piles." On February 24, 2012, wherein the FDOT memorialized its understanding "that GLF was going ahead with preformed pile holes as all other attempts by GLF had failed to produce the desired results. . . ." The FDOT also expressly "authorized [GLF] to use preformed pile holes for the special detour 1 as shown on Sheet B2-5." In light of the FDOT authorizing GLF to preform pile holes on the project, the second trigger for additional compensation stated in section 455-5.9 was satisfied.

6. Preforming Pile Holes Was Proven Necessary by GLF

As explained in some detail in Point 1 of this position statement, GLF did not seek authorization to begin preforming pile holes on this project until exhausting a multitude of different pile driving methods with a multitude of pile driving equipment. It was not until these methods established that the required minimum penetrations could not otherwise be obtained that GLF made the request of the FDOT to authorize preforming. The FDOT confirmed "that all other attempts by GLF had failed to produce the desired results" in its February 24 letter that also authorized preforming on the detour bridge.

In short, GLF established the necessity of preforming pile holes on the project and satisfied the third trigger for additional compensation stated in section 455-5.9 in the process.

7. Although Lump Sum Items of Work, GLF Is Entitled to Additional Compensation

The payment terms of section 455-5.9 are satisfied under any objective view of the facts. The FDOT, however, after first recognizing that it owed additional compensation and indicating that it would prepare the necessary Supplemental Agreement, changed course and denied entitlement to GLF. The FDOT's purported rationale is that both the Temporary Work Structure and Detour Bridge are lump sum pay items. The FDOT's reliance on the lump sum nature of the work is misplaced.

Both pay item 102-2-1, Special Detour 1, and 103-1-8, Temporary Work Structure are lump sum pay items, but that method of payment is not a transfer of all plan or field contingencies that may occur. The specifications establish that contractors are entitled to additional compensation for lump sum pay items despite the lump sum nature of the work. Stated differently, under the Contract Documents lump sum specifies a method of payment and does not transfer all risks to the contractor.

For example, since the lump sum pay item for the Special Detour contains estimated quantities for temporary embankment, excavation, and temporary pavement, among other items, GLF would be entitled to an adjustment in the lump sum price for the construction of that work in the event of a substantial error in those quantities per section 9-3.3.1.

More germane to the issue at hand is section 9-3.3.2 which provides, in part, that:

"When the plans do not show an estimated plan quantity or the applicable specifications do not provide adjustments for contingencies, the FDOT will compensate for any authorized plan change resulting in an increase or decrease in the cost of acceptably completing the item by establishing a new unit price through a supplemental agreement as provided in 4-3.2."

Although the plans do show that both the Temporary Work Structure and the Detour Bridge are to be constructed with piles, neither shows an estimated plan quantity for pile installation – thus potentially implicating section 9-3.3.2 and requiring the FDOT to make compensation for the FDOT authorized preforming that resulted in an increase in the cost of acceptably completing each lump sum pay item. Although the plans contemplate the possibility of preforming, there is nevertheless a change in plan when put into practice as nothing in those plans inform as to which piles, in which locations, may require preforming – if any at all. When there is a change in plan such as actual driving conditions necessitating preformed pile holes, section 9-3.3.2 dictates the FDOT will compensate the contractor for the extra costs associated with that effort.

Section 9-3.3.2 provides for an alternate form of relief from lump sum pricing – contingencies. Section 9-3.3.2 provides that lump sum prices are subject to adjustment when the applicable specifications already provide for contingencies and here, the applicable specification – section 455-5.9 – provides for adjustments for the contingency of having to preform piles. As discussed above, each of the three triggers for preforming in section 455-5.9 has been satisfied and GLF is entitled to additional compensation despite the lump sum payment mechanism employed by the FDOT.

Summary – Contractor's Position

Nothing in the Contract Documents changes the customary risk-sharing mechanism in section 455-5.9 or otherwise informs bidders that the normal rules regarding payment for preformed pile holes were not applicable to this project. Had the FDOT intended for the contractor to include the risk of preform pile holes for all piles installed on the project rather than anticipating additional compensation through the section 455-5.9 contingency, it would have (a) stated this intent in the plan notes that already address preforming by expressly directing that all costs for preforming be included in the lump sum item, or (b) modifying section 455-5.9 by special provision to delete those provisions that obligate the FDOT to provide additional compensation in the event that preforming is required.

The FDOT did neither, and GLF is entitled to additional compensation for the work required to achieve minimum pile penetration through the use of preform pile holes as the triggers in section 455-5.9 have each been satisfied on this Project.

FDOT Position

The following summary of the FDOT's position is based upon written materials submitted to the Board and upon the hearing presentation. The complete position is available in the FDOT's submitted written materials. The FDOT has discussed its position with regard to the temporary work structure and the Temporary Detour Bridge separately.

Key Points - Temporary Work Structure

1. The contract documents place the responsibility and risks associated with the construction of the work platform upon GLF, with payment to be made as one lump sum.

The FDOT furnished plans and specifications for the project at the time of award. On plan sheet 2 is the pay item #103-1-8 work structure, project number 210873-2-52-01(21087325201) with a unit of 1 and payment type One Lump Sum, with a quantity of 1. The plans contain no pay item notes associated with the pay item in the plan sheets. Likewise, the specifications package contains no modifications to the Standard Specifications for Road and Bridge Construction 2010 for this item. The appropriate specification for the work structure is in the 2010 edition of the specifications. The appropriate language for the work platform is found in Section 103 Temporary Work Structures.

103-1 Description states the following:

103-1.1 Scope of Work: Construct temporary work structures used solely to support construction equipment. Temporary structures include but are not limited to work bridges, elevated platforms and rail systems....

Additionally, under section 103-1.2

Materials: Construct the temporary work structure using materials sufficient to handle the anticipated loads. Assume responsibility for the design of the temporary structure.

Finally, in section 103-2 Basis of Payment is 103-2.1 General: The unit price for the temporary work structure will include all costs associated with the design, materials, labor, installation, removal and disposal of the structure.

*103-2.2 Partial Payments: When.....Payment will be made under: Item No. 103-1- Temporary Work Structures
Lump Sum.*

The Contractor has been paid 73% of the lump sum bid price as of the last monthly estimate in accordance with the above specification.

Key Points – Temporary Detour Bridge

1. Contractor is required to construct the temporary bridge and its foundation for one lump sum as stated in the plans by the Pay Item 102-2-1 and the pay item note on sheet

The FDOT furnished plans and specifications for the project at the time of award. On plan sheet 2 is the pay item #102-2-1 special detour 1 (21087325201) with a unit of 1 and payment type One Lump Sum, with a quantity of 1. There is a pay item note associated with the pay item on sheet 6. The primary plan sheets of interest for this issue are B1-10 thru B1-25 Report of Core Borings, B1-26 thru B1-28 Foundation Layout, B2-1 Construction Phasing, B2-2 thru B2-4 Detour Bridge Plan and Elevation, B2-5 thru B2-7 Detour Bridge Foundation Layout, B2-8 Detour Bridge Pile Installation Table, B2-9 thru B2-10 Detour Bridge Sections and B2-11 Detour Bridge Details.

The applicable specifications are in the supplemental specifications Section 102-6 Detours. The applicable specification for the pile driving operations is in the Standard Specifications for Road and Bridge Construction 2010 Section 455 Structures Foundations.

Also, the 2011 Standard Index modifications will be referenced. Plan sheet B2-2 and B2-5 has a general note specifically calling out index numbers 21600 and 21620. Contract time commenced on September 29, 2011.

The concept for the foundation of the temporary bridge in the contract bid documents use HP 14x73 steel piles (H-piles). H-piles were selected by the Engineer of Record because they were deemed to be more cost effective based on the hard rock conditions as depicted in the Core Borings (sheets B1-10 thru B1-25).

On October 10, 2011, a Pile Foundation Plan for the temporary bridge was prepared and submitted to the FDOT for Review. The foundation plan presented by the Contractor changed the foundation to 24 inch diameter steel pipe piling with 1/2 inch wall thickness. The switch to pipe piling was allowed as this is a permissible foundation type in Standard Index 21630. However, the initial submittal was rejected due to computation errors. In mid- February, a subsequent foundation plan with pipe piles was approved for the temporary bridge.

On February 13, 2012, the FDOT received a letter titled "Request for Direction - Pile Installation". The main request of the letter was for direction in regard to a plan note 5 on sheet B2-5 of the contract plans. The note states the following: "5. Hard layers of limestone may be encountered at varying elevations. Driving of piles may be difficult. If minimum penetration requirements cannot be achieved, install piles in preformed holes as authorized by the Engineer. Preforming hole depth a minimum of 5 feet from top of the rock surface. Install piles by driving a minimum of 3 feet below bottom of preformed hole to required capacity or refusal, whichever is less. Preformed holes shall be 20 in diameter." It is important to note that the exact same note appears in the approved pile driving plan submitted by the Contractor (Attachment 9). The Contractor is using 24 inch diameter pipe piling which requires a larger preform pile hole.

On February 24, 2012, the FDOT responded and gave direction to proceed with preforming at no additional cost to the FDOT. The basis for no additional cost is the plan note for Pay Item 102-2-1 Special Detour. Pay item note 102-2-1 on sheet 6 states "Includes all construction associated with the temporary detour bridge, including maintenance and removal. Includes....." The pay item is one lump sum. The Contractor has requested payment for preformed pile holes under specification 455-5.9 Preform Pile Holes. However, in the rank order of contract documents, this specification is superseded by the Pay Item note 102-2-1 on sheet 6.

Summary- FDOT Position

It is the FDOT's position that contract documents place the responsibility and risks associated with the construction of the work platform upon GLF, with payment to be made as one lump sum.

On the temporary bridge the Contractor is required to construct the temporary bridge and its foundation for one lump sum as stated in the plans by the Pay Item 102-2-1 and the pay item note on sheet 6. It is the FDOT's position that the Contractor modified the design of the temporary bridge foundation which solidifies his responsibility for the foundation.

Based on the above, the Department respectfully requests that the RDRB find the contractor to not be entitled to compensation for these two issues with regards to preform pile holes.

Disputes Review Board Findings

1. Initial attempts to install the Contractor's choice of 24 inch diameter pipe piles were unsuccessful as a result of subsurface rock.
2. The Contractor advised the FDOT of this situation and requested authorization to preform the pile holes and additionally requested compensation in accordance with 2010 Standard Specification Section 455-5.9.3. (See footnote #1)
3. The FDOT requested pricing and indicated that a Supplemental Agreement would be processed. (See footnote #3)
4. Subsequently the FDOT provided authorization to preform the pile holes, however, the FDOT position concerning additional compensation was reversed. (see footnote #7)
5. Pay item #103-1-8 work structure and pay item #102-2-1 special detour are clearly designated in the plans as Lump Sum pay items with a quantity of 1.
6. Specification Section 455 Structures and Foundations covers foundations and structures. Subsections 455-3 to 455-12 cover piling. Subsection 455-9 covers Preformed Pile Holes. Subsections 455-5-9.2 and 455-9.3 address the contract provisions relating to the need for preforming pile holes and the issue of additional compensation for preforming pile holes.¹¹

455-5.9.2 Provisions for Use of Preformed Pile Holes: The Department generally anticipates the necessity for Preformed Pile Holes and includes directions in the Contract Documents. The Department will pay for Preformed Piles Holes when the Contractor establishes that the required results cannot be obtained when driving the load bearing piles with specified driving equipment, or if jetting is allowed, while jetting the piles and then driving or while jetting the piles during driving.

455-5.9.3 Conditions Under Which Payment Will Be Made: The Department will make payment for Preformed Pile Holes shown in the plans, required by the Engineer or where the Contractor demonstrates that such work is necessary to achieve the required penetration of the pile. The Department considers, but does not limit to, the following conditions as reasons for Preformed Pile Holes:

- (a) Inability to drive piles to the required penetration with driving and jetting equipment*
- (b) To penetrate a hard layer or layers of rock or strong stratum that the Engineer considers not sufficiently thick to support the structure*
- (c) To obtain greater penetration into dense (strong) material and into dense material containing holes, cavities, or unstable soft layers*
- (d) To obtain penetration into stratum in which it is desirable to found the structure*
- (e) To minimize the effects of vibrations or heaving on adjacent existing structures*

¹¹ 2010 Standard Specifications, Section 455, Subsections 455-9.2 and 455-9.3

7. Specification Section 102 Maintenance of Traffic covers requirements for maintaining traffic flow with temporary traffic control measures. Subsection 102-6 covers logistical issues with regard to obtaining temporary bridge components from the FDOT.
8. Specification Section 103 Temporary Work Structures specifically covers the requirements for contractor design and construction of temporary structures to support the construction operation.
9. Note 4 on plan sheet B2-5 refers to Specification Section 455-5.2 with regard to the required pile driving system to be used during construction of the Temporary Detour Bridge.
10. A note on plan sheet B2-8 refers to Specification Section 455-5.8 with regard to the pile penetration requirements for the Temporary Detour Bridge.

Disputes Review Board Recommendation

The DRB has not been asked to address the question of quantification and does not offer an opinion on the issue of quantification.

Specification section 455 clearly and specifically provides for compensation to the Contractor when preformed pile holes are a necessity. The critical question in this dispute, given the project documents, is whether or not the provisions of specification section 455 apply to the construction of the Temporary Detour Bridge and to the Temporary Work Structure. The choice of a lump sum pay format does not set aside specific contract language providing for additional compensation when a specified condition exists. Other than the administrative discussion in specification section 102 Maintenance of Traffic (subsection 102-6), specification section 455 is the only technical specification addressing the technical specification for piling installation. Additionally, plan notes refer the Contractor to specification section 455-5.2 with regard to the pile driving system for the Temporary Detour Bridge and to section 455-5.8 with regard to pile penetration requirements for the Temporary Detour Bridge. Given the absence of any clear notice to the contrary in the documents, the Contractor's reliance on specification section 455 is justified with regard to preforming pile holes for the Temporary Detour Bridge.

The technical specifications for the temporary work structure are provided in specification section 103 Temporary Work Structures, which assigns responsibility for design and construction to the Contractor. Section 103 does not contain a provision for additional compensation for preforming pile holes. There are no references in the drawings to section 455 with regard to the temporary work structure.

It is the DRB's recommendation that GLF is entitled to additional compensation for the work associated with the preforming of pile holes for the Temporary Detour Bridge structure.

It is the DRB's recommendation that GLF is not entitled to additional compensation for the work associated with the preforming of pile holes for the Temporary Work Structure.

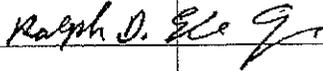
The Board appreciates the cooperation of all parties and the information presented for review in order to make this recommendation.

I certify that I have participated in all meetings and discussions regarding the issues and concur with the findings and recommendation.

Respectfully submitted,
Disputes Review Board

Ralph Ellis Jr. – Chairman
Jimmy Lairscey – Member
Robert Robertory - Member

Signed for all with the concurrence of all members.



Ralph D. Ellis, Jr.
Chairman